Rohit Aggarwal

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Education

- **Indian Institute of Technology Bombay** — Mumbai,India
  B.Tech (Aerospace Engineering) (CPI-6.66) — *July 2014 – August 2018*
- **Aggarwal Public School** — Faridabad,India
  High School (percentage- 94.2) — *July 2012 – May-2014*

Scholastic Achievements

- Scored 1762 AIR in JEE advance for which more than 5 lakh students appear
- Selected for KVPY scholarship (2013-14) for which only 1200 students were selected
- Cleared PGDBA exam in which 600 applicants are selected all over India

NLP projects

- **Sentiment Analysis of Movie reviews** — June 2017 - July 2017
  - Analysed the sentiment of movie reviews by performing TF-IDF vectorization and splitting the dataset into training and testing set
  - Compared performance of Multimonial and Naive Bayes classifier used for binary classification
  - Calculated the accuracy of both the algorithms using AUC score and confusion matrix
- **Clause Search** — June 2019 - July 2019
  - Performed Optical Character Recognition on the pdf documents to extract text from them.
  - Then split each document into clauses and stored them into array
  - Used regex and K-means to search for important clauses according to the problem statement
  - Used TextRank for the summarizing of the clauses extracted

Experience

- **CAPGEMINI** — Bangalore
  Associate Consultant (Airbus) — *September 2018 - Present*
  - Currently working as a software Developer in Airbus on PDM link system
  - Handling their inventory management website which involves Database migrations, extracting data, parsing it, developing back-end services for the same and passing it to the front-end
  - Helped senior developer with the creation of Batch Files so that system setup can be automated

College Technical Projects/ Courses

- **K-mean Clustering using CUDA** — Course Project, HPSC
  Guide:Prof. Shivasubramanian Gopalakrishnan — *Jan 2018 - April 2018*
  - Finding the activity (sitting ,standing ,running) a person is performing depending on his heartbeat.
  - Used K-means clustering algorithm for the unstructured data and parallelized it for a faster algorithm using process parallelizing in GPU computing
  - Achieved twice as fast algorithm with OpenCL and ten times faster algorithm using GPU computing
- **Learning Classifier System** — Supervised Learning Project
  Guide:Prof. R.P.Shimpi — *Jan 2018 - April 2018*
  - Studied various genetic and meta-heuristic algorithms as part of Optimization course and used FirefLy algorithm for optimization of multi-modal function using MATLAB
  - LCS algorithms are a combination of machine learning tools and Genetic Algorithms. Search part of Neural networks can be replaced by genetic algorithm's search methods

- **Precision Airdrop Delivery System** Design Project
  Guide:Prof. G.R.Shevre *May 2018 - July 2018*
  - Did research on various Airdrop delivery systems with my team members
  - Designed a CAD model for Para-glider that could deliver an Anti-Aircraft Gun where helicopters can't reach at high altitudes such as Siachin. Also, did CFD analysis for the same
  - Navigated the para-glider to the drop point using 3 degree of freedom system analysis
- **Drop Test** Summer Undergraduate Summer Project
  Guide:Arindrajit Chowdhary *May 2016 - July 2018*
  - Drop test is the method used to test ignition delay of hypergolic fuels using either a slow motion camera or optoelectronic circuit(which uses light sensors to detect voltage change)
  - Tested various hypergolic fuels to find replacement for conventionally used fuels which are less toxic and have comparable ignition delay

Self Learning

- **Machine Learning** Columbia,edX [June 2017 - August 2017]
  - Did an online course for better understanding of data analysis tools in parallel to a course on Statistics and Probability offered by our institute
  - Studied unsupervised and supervised learning algorithms like random forest search, logistic regression, K-mean clustering, multi class classification
  - Used various in-built python Libraries like pandas, Numpy, Skicit-Learn, NLTK
- **Deep Learning** Microsoft,edX [March 2019 - present]
  - Studied Artificial Neural Network and how to create such networks using Pytorch and Keras.
  - Used different gradient descent methods for weight calculation and used them to classify images

Programming Skills

- **Languages**: Python(), C++,C Sharp, SQL, Java,HTML
- **Technologies**: Simulink(MATLAB), CUDA, LaTeX
- **Operating System**: Microsoft, Linux

Extra Curricular Activitiy

- Completed Navy Half Marathon(Mumbai), Cerebral Palsy Half Marathon(Mumbai), Women's Day 10k run(Bangalore) and Max Life Insurance 10k run(Bangalore) and TCS 10k world run(Bangalore). Improved my timing with each race
- Part of Institute Kho Kho team which won Silver medal in Spardha(IIT BHU sports Fest)
- Participated in RC Bot competition and Line Follower competition with a team of 4 people
- Awarded hostel color for 2 consecutive years for my involvement i inter-hostel general championship and helping my hostel to bag third position in 4*400 mtr relay, second position in kho-kho and hockey and fourth position in hammer throw
- Helped in organisation of techfest'2015-16 and handled accommodation of 3500 participants in our institute with the help of 20 other volunteers
- Awarded second place in 2 district level quiz competitions Bharat ko jano and one from Bal Vikas Parishad